

GREEN FRINGED ORCHID (*PLATANThERA LACERA*, ORCHIDACEAE) IN SOUTHERN LOUISIANA

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ABSTRACT

A new population of *Platanthera lacera* is reported for Vernon Parish, southern Louisiana.

RESUMEN

Se cita una nueva población de *Platanthera lacera* de Vernon Parish, Sur de Louisiana.

Green fringed orchid (***Platanthera lacera*** (Michx.) G. Don) was reported for Louisiana as early as 1852 by Riddell (1852). A specimen was collected in Shreveport in Caddo Parish by MacRoberts in 1976 (MacRoberts 1977). Apparently, this specimen was misidentified and not included in the orchid flora of Louisiana by Prigeon and Urbatsch (1977) and excluded by Thomas and Allen (1993). This species was reinstated to the Louisiana flora by MacRoberts and MacRoberts (1998); the authors also stated that the site for the collection in Caddo Parish was now a housing development. Green fringed orchid is reported from all of the eastern United States except for Florida (USDA, NRCS 2005). In Texas, this orchid is reported only from Bowie County (Correll 1947; Liggio & Liggio 1999).

The habitats reported for this orchid include open sedge swamps and marshes, bogs, meadows, and glades of open woods, swampy woods and wet or occasionally dry open fields and prairies, and in thickets (Correll 1978; Liggio & Liggio 1999; Radford et al. 1968). In *Flora of North America* Editorial Committee (2002), this species is reported from sphagnum bogs, alluvial and swamp forests, stream banks, riparian meadows, sand flats, moist and seeping slopes, prairies, roadside banks, ditches, old fields, and borrow pits. According to Liggio and Liggio (1999), this orchid has a preference for acidic soils but is indifferent to varying conditions of moisture, sunlight, and shade.

On May 6, 2005, a new population of green fringed orchid was discovered in Vernon Parish, Louisiana which is ca 150 miles south of the Caddo Parish location and apparently the southernmost location in the United States. The collection data are:

Voucher specimen: **LOUISIANA. Vernon Parish:** along edge of mowed hunting trail, edge of pasture and beech/white oak forest in Section 14 T2S R7W, GPS N30.942 W93.053, ca. 1/4 mi SW of Talbert-Pierson Cemetery (Pine Grove Church) and ca. 5 mi NW of Sugartown in drainage of unnamed creek that drains into Whiskey Chitto Creek, 24 May 2005, *Allen et al 19415*, (BRIT, Fort Polk Herb., ULM).

The habitat varied from an open mowed trail to the dense edge of the beech/white oak forest of the creek edge and from moderately well drained to moist soil. The soil type is Gore which is a very fine sandy loam with 5 to 12 percent slopes (Soil Survey Staff 2003). The elevation in the area ranges from 150 to 160 feet. The plants had just begun to flower on May 6, seemed to peak around May 20, and just a very few flowers were noted on June 11, 2005.

During May 2005, the site was revisited several times and 35 clumps of the orchid were noted; most clumps had a single flowering stem but a few had two flowering stems. The area surrounding each of the 35 clumps was examined and the five nearest individuals were identified including herbaceous, woody vine, shrub (woody non-vines shorter than six feet), shrubs/saplings (woody non-vines taller than six feet and five inch or less dbh), and trees (woody non-vines taller than six feet and larger than 5 inch dbh) species (Table 1). The percent of each species out of the 175 total individuals (five times 35) for each category is listed in Table 1; for the herbaceous and woody vines only one percent is reported for each species and for the woody non-vine species, the first percent listed is the shrub, the second is the shrubs/saplings, and third is the trees. The surrounding area was examined for a distance of twenty feet and all associated species were identified and listed in Table 1. A total of 124 species from 90 genera and 56 families were identified as a nearest individual or associated species. Densiometer readings were taken at each clump and the average cover percent was 61.04% and ranged from 43.03% to 75.00%.

The most common occurring nearest herbaceous species was *Chasmanthium sessiliflorum* (Poir.) Yates (17.71%) and was followed by *Dichanthelium dichotomum* (L.) Gould (12.57%), *Sanicula canadensis* L. (8.57%), *Allium canadense* L. (8.00%), and *Dichanthelium laxiflorum* (Lam.) Gould (5.71%). The woody vine species that was most commonly nearest the orchid was *Toxicodendron radicans* (L.) Kuntze (38.29%) and was followed by *Lonicera japonica* Thunb. (37.14%) and *Parthenocissus quinquefolia* (L.) Planch. (12.57%). The most common nearest shrub species was *Rubus argutus* Link (25.71%) and was followed by *Quercus alba* L. (8.57%), *Callicarpa americana* L. (7.43%), and *Quercus hemisphaerica* Bartr. ex Willd. (6.86%). The most common nearest tree species with smaller dbh (5 inch or less) were *Pinus taeda* L. (30.86%) and *Ilex vomitoria* Ait. (12.00%) and with the larger dbh (> 5 inch dbh) were *Liquidambar styraciflua* L. (23.43%), *Triadica sebifera* (L.) Small (20.00%), and *Quercus alba* L. (17.14%).

TABLE 1. List of species associated with 35 clumps of green fringed orchid in Vernon Parish, Louisiana, during May 2005 with percent¹ of nearest individual records.**ACANTHACEAE***Ruellia caroliniensis* (J.F. Gmel.) Steud. (1.14%)**ACERACEAE***Acer rubrum* L. (5.71%, 1.71%, 1.71%)**ANACARDIACEAE***Toxicodendron radicans* (L.) Kuntze (38.29%)**APIACEAE***Ptilimnium capillaceum* (Michx.) Raf.*Sanicula canadensis* L. (8.57%)**AQUIFOLIACEAE***Ilex opaca* Ait. (1.14%, 0, 0)*Ilex vomitoria* Ait. (3.43%, 12.00%, 0)**ARACEAE***Arisaema triphyllum* (L.) Schott**ARALIACEAE***Aralia spinosa* L. (2.29%, 3.43%, 0.57%)**ARISTOLOCHIACEAE***Aristolochia serpentaria* L.**ASPLENIACEAE***Asplenium platyneuron* (L.) B.S.P.**ASTERACEAE***Elephantopus carolinianus* Raeusch. (2.86%)*Helenium flexuosum* Raf.*Lactuca canadensis* L.*Solidago canadensis* L. (4.57%)*Solidago rugosa* P. Mill. (1.71%)*Symphotrichum lateriflorum* (L.) A. & D. Löve (2.29%)**BETULACEAE***Carpinus caroliniana* Walt. (1.71%, 3.43%, 1.71%)*Ostrya virginiana* (P. Mill.) K. Koch (0, 1.14%, 0)**BIGNONIACEAE***Bignonia capreolata* L. (3.43%)**CAMPANULACEAE***Lobelia appendiculata* A. DC.**CAPRIFOLIACEAE***Lonicera japonica* Thunb. (37.14%)*Sambucus nigra* L. (2.29%, 2.29%, 0)*Viburnum acerifolium* L.*Viburnum dentatum* L. (1.14%, 2.29%, 0)**CELASTRACEAE***Euonymus americana* L. (0.57%, 0, 0)**CLUSIACEAE***Hypericum hypericoides* (L.) Crantz*Hypericum mutilum* L.**CORNACEAE***Cornus florida* L. (0.57%, 0, 0)**CUPRESSACEAE***Juniperus virginiana* L. (0, 0.57%, 0)**CYPERACEAE***Carex complanata* Torr. & Hook. (2.86%)*Carex debilis* Michx.*Carex digitalis* Willd.*Carex festucacea* Schkuhr ex Willd.*Carex flaccosperma* Dewey (0.57%)*Carex longii* Mack. (0.57%)*Carex rosea* Willd. (1.14%)*Carex texensis* (Torr.) Bailey*Rhynchospora caduca* Ell.*Scleria oligantha* Michx.**DIOSCOREACEAE***Dioscorea villosa* L.**DRYOPTERIDACEAE***Onoclea sensibilis* L.*Polystichum acrostichoides* (Michx.) Schott.**EBENACEAE***Diospyros virginiana* L. (0.57%, 0, 0)**ERICACEAE***Vaccinium arboreum* Marsh.*Vaccinium elliotii* Chapman (1.14%, 0, 0)**EUPHORBIACEAE***Triadica sebifera* (L.) Small (1.14%, 8.00%, 20.00%)**FABACEAE***Galactia volubilis* (L.) Britton*Lespedeza cuneata* (Dum.-Cours.) G. Don (0.57%)*Trifolium repens* L. (0.57%)*Vicia sativa* L. ssp. *nigra* (L.) Ehrh. (1.71%)**FAGACEAE***Fagus grandifolia* Ehrh. (0, 0.57%, 10.29%)*Quercus alba* L. (8.57%, 0.57%, 17.14%)*Quercus hemisphaerica* Bartr. ex Willd. (6.86%, 6.86%, 0)*Quercus nigra* L. (4.00%, 2.29%, 1.14%)**HAMAMELIDACEAE***Hamamelis virginiana* L. (0, 1.71%, 0)

TABLE 1. continued

<i>Liquidambar styraciflua</i> L. (3.43%, 5.14%, 23.43%)	OROBANCHACEAE
JUGLANDACEAE	<i>Epifagus virginiana</i> (L.) W. Bart.
<i>Carya alba</i> (L.) Nutt. ex Ell. (0, 0, 0.57%)	OSMUNDACEAE
<i>Carya glabra</i> (P. Mill.) Sweet var. <i>hirsuta</i> (Ashe) Ashe (5.14%, 0, 3.43%)	<i>Osmunda cinnamomea</i> L.
<i>Carya illinoensis</i> (Wangenh.) K. Koch	<i>Osmunda regalis</i> L.
JUNCACEAE	OXALIDACEAE
<i>Juncus coriaceus</i> Mack.	<i>Oxalis stricta</i> L.
<i>Juncus marginatus</i> Rostk. (0.57%)	PINACEAE
<i>Juncus polycephalus</i> Michx.	<i>Pinus taeda</i> L. (0, 30.86%, 10.29%)
<i>Juncus tenuis</i> Willd. (1.71%)	POACEAE
LAMIACEAE	<i>Andropogon gerardii</i> Vitman (1.14%)
<i>Pycnanthemum tenuifolium</i> Schrad.	<i>Briza minor</i> L.
<i>Salvia lyrata</i> L. (0.57%)	<i>Chasmanthium laxum</i> (L.) Yates
<i>Scutellaria elliptica</i> Muhl. ex Spreng. (0.57%)	<i>Chasmanthium sessiliflorum</i> (Poir.) Yates (17.71%)
LAURACEAE	<i>Dichanthelium acuminatum</i> (Sw.) Gould & C.A. Clark var. <i>lindheimeri</i> (Nash) Gould & C.A. Clark
<i>Sassafras albidum</i> (Nutt.) Nees (0.57%, 0, 0)	<i>Dichanthelium boscii</i> (Poir.) Gould & C.A. Clark (4.00%)
LILIACEAE	<i>Dichanthelium commutatum</i> (J.A. Schultes) Gould (4.57%)
<i>Allium canadense</i> L. (8.00%)	<i>Dichanthelium dichotomum</i> (L.) Gould (12.57%)
<i>Lilium michauxii</i> Poir.	<i>Dichanthelium laxiflorum</i> (Lam.) Gould (5.71%)
<i>Polygonatum biflorum</i> (Walt.) Ell.	<i>Leersia virginica</i> Willd.
LINACEAE	<i>Lolium perenne</i> L. (2.29%)
<i>Linum striatum</i> Walt.	<i>Melica mutica</i> Walt.
LOGANIACEAE	<i>Oplismenus hirtellus</i> (L.) Beauv. (2.29%)
<i>Gelsemium sempervirens</i> (L.) St. Hil. (0.57%)	<i>Paspalum urvillei</i> Steud.
LYCOPODIACEAE	<i>Sphenopholis obtusata</i> (Michx.) Scribn. (0.57%)
<i>Lygodium japonicum</i> (Thunb. ex Murr.) Sw. (0.57%)	RHAMNACEAE
MELIACEAE	<i>Berchemia scandens</i> (Hill) K. Koch (1.71%)
<i>Melia azedarach</i> L. (0.57%, 2.29%, 0.57%)	ROSACEAE
MORACEAE	<i>Crataegus marshallii</i> Egglest. (0.57%, 0, 0)
<i>Morus rubra</i> L. (0.57%, 1.71%, 0)	<i>Prunus serotina</i> Ehrh. (0.57%, 0, 0)
MYRICACEAE	<i>Rubus argutus</i> Link (25.71%, 0, 0)
<i>Morella cerifera</i> (L.) Small (0.57%, 0.57%, 0)	<i>Rubus trivialis</i> Michx. (3.43%, 0, 0)
NYSSACEAE,	RUBIACEAE
<i>Nyssa sylvatica</i> Marsh. (4.57%, 0, 4.00%)	<i>Galium pilosum</i> Ait.
OLEACEAE	<i>Galium tinctorium</i> L. (4.00%)
<i>Chionanthus virginicus</i> L. (0, 0, 0.57%)	<i>Galium uniflorum</i> Michx.
<i>Ligustrum sinense</i> Lour. (4.57%, 8.00%, 0)	<i>Mitchella repens</i> L. (2.86%)
ONAGRACEAE	SMILACACEAE
<i>Ludwigia alternifolia</i> L.	<i>Smilax glauca</i> Walt. (2.29%)
<i>Ludwigia palustris</i> (L.) Ell.	<i>Smilax pumila</i> Walt.
	<i>Smilax rotundifolia</i> L.

TABLE 1. continued

<i>Smilax smallii</i> Morong	VERBENACEAE
<i>Smilax tamnoides</i> L.	<i>Callicarpa americana</i> L. (7.43%, 2.29%, 0)
THELYPTERIDACEAE	VIOLACEAE
<i>Thelypteris kunthii</i> (Desv.) Morton	<i>Viola sororia</i> Willd. (1.14%)
ULMACEAE	VITACEAE
<i>Ulmus alata</i> Michx. (1.14%, 2.29%, 2.86%)	<i>Parthenocissus quinquefolia</i> (L.) Planch. (12.57%)
<i>Ulmus americana</i> L. (0, 0, 1.71%)	<i>Vitis rotundifolia</i> Michx. (4.00%)
URTICACEAE	
<i>Boehmeria cylindrica</i> (L.) Sw.	

¹ Percent of nearest individual records = number of nearest plant records divided by 175 and multiplied by 100 for each species category. The categories are herbaceous, woody vine, shrub (woody non-vines shorter than six feet) (first percent), shrubs/saplings (woody non-vines taller than six feet and five inch or less dbh) (second percent), and trees (woody non-vines taller than six feet and larger than 5 inch dbh) (third percent).

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